

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	edge adj bounded adj averag\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 13:01
L2	374663	pixel\$1 or pel\$1 or (picture adj element\$1)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 13:10
L3	850	(averag\$3 or mean) near2 ((touching or connected or adjacent) near2 2)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 15:37
L4	72	3 with (mask or window or block or template\$1)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 14:05
L5	11	((touching or connected or adjacent) near2 2) near4 ((divid\$3 or ratio or proportion or fraction) near3 (total or all))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 14:50
L6	2	immediate adj neighbor adj averaging	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 14:06
L7	5050	text\$3 near2 extract\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 15:45
L8	1350	classif\$7 near3 (edge\$1 or (line adj segment\$1))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 15:46

L9	1	7 same 8	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 15:47
L10	21	7 and 8	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/18 15:47

10/044558



US Patent & Trademark Office

[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)Search: ☒ The ACM Digital Library ☐ The Guide**SEARCH**

Nothing Found

Your search for **+"edge bounded averaging"** did not return any results.

You may want to try an [Advanced Search](#) for additional options.

Please review the [Quick Tips](#) below or for more information see the [Search Tips](#).

Quick Tips

- Enter your search terms in lower case with a space between the terms.

sales offices

You can also enter a full question or concept in plain language.

Where are the sales offices?

- Capitalize proper nouns to search for specific people, places, or products.

John Colter, Netscape Navigator

- Enclose a phrase in double quotes to search for that exact phrase.

"museum of natural history" "museum of modern art"

- Narrow your searches by using a **+** if a search term must appear on a page.

museum +art

- Exclude pages by using a **-** if a search term must not appear on a page.

museum -Paris

Combine these techniques to create a specific search query. The better your description of the information you want, the more relevant your results will be.

museum +"natural history" dinosaur -Chicago

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2005 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#)  [Real Player](#)



US Patent & Trademark Office

[Subscribe](#) (Full Service) [Register](#) (Limited Service, Free) [Login](#)

Search: ☒ The ACM Digital Library ☐ The Guide

(averag* <or> mean) <near> ((touch* <or> connect* <or> adjacent) <n...

SEARCH

Nothing Found

Your search for **(averag* <or> mean) <near> ((touch* <or> connect* <or> adjacent) <near> (pixel <or> pel <or> element))** did not return any results.

You may want to try an [Advanced Search](#) for additional options.

Please review the [Quick Tips](#) below or for more information see the [Search Tips](#).

Quick Tips

- Enter your search terms in lower case with a space between the terms.

sales offices

You can also enter a full question or concept in plain language.

Where are the sales offices?

- Capitalize proper nouns to search for specific people, places, or products.

John Colter, Netscape Navigator

- Enclose a phrase in double quotes to search for that exact phrase.

"museum of natural history" "museum of modern art"

- Narrow your searches by using a + if a search term must appear on a page.

museum +art

- Exclude pages by using a - if a search term must not appear on a page.





museum -Paris

Combine these techniques to create a specific search query. The better your description of the information you want, the more relevant your results will be.

museum +"natural history" dinosaur -Chicago

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2005 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#)  [Real Player](#)



US Patent & Trademark Office

[Subscribe](#) (Full Service) [Register](#) (Limited Service, Free) [Login](#)

Search: ☒ The ACM Digital Library ☐ The Guide

(((touching <or> connected <or> adjacent) <near> (pixel <or>

SEARCH

Nothing Found

Your search for (((touching <or> connected <or> adjacent) <near> (pixel <or> pel <or> element))<near> ((divid* <or> ratio <or> proportion <or> fraction) <near> (total <or> all))) did not return any results.

You may want to try an [Advanced Search](#) for additional options.

Please review the [Quick Tips](#) below or for more information see the [Search Tips](#).

Quick Tips

- Enter your search terms in lower case with a space between the terms.

sales offices

You can also enter a full question or concept in plain language.

Where are the sales offices?

- Capitalize proper nouns to search for specific people, places, or products.

John Colter, Netscape Navigator

- Enclose a phrase in double quotes to search for that exact phrase.

"museum of natural history" "museum of modern art"

- Narrow your searches by using a + if a search term must appear on a page.

museum +art

- Exclude pages by using a - if a search term must not appear on a page.

museum -Paris

Combine these techniques to create a specific search query. The better your description of the information you want, the more relevant your results will be.


museum +"natural history" dinosaur -Chicago

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2005 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#)  [Real Player](#)

10/044558


[Web](#) [Images](#) [Groups](#) [News](#) [Froogle](#) [Local](#)^{New!} [more »](#)
 [Advanced Search](#)
[Preferences](#)

WebResults 1 - 5 of about 6 for "**edge bounded averaging**". (0.29 seconds)

Tip: Try removing quotes from your search to get more results.

HP Labs : Tech Report: HPL-2002-294: Text Extraction via an

... Click here for full text: PDF Text Extraction via an **Edge-bounded Averaging** and a Parametric Character Model. Fan, Jian. HPL-2002-294 20021025 External. ...

www.hpl.hp.com/techreports/2002/HPL-2002-294.html - 31k - [Cached](#) - [Similar pages](#)

HP Labs Research - Printing & Imaging

... Jian Fan, "Text extraction via an **edge-bounded averaging** and a parametric character model", HP Labs Tech Report HPL 2002-294, (pdf download), A shorter version ...

www.hpl.hp.com/research/isl/TextExtraction/ - 32k - [Cached](#) - [Similar pages](#)

[[More results from www.hpl.hp.com](#)]

Text extraction via an **edge-bounded averaging** and a parametric ...

Text extraction via an **edge-bounded averaging** and a parametric character model.

[Proceedings of SPIE 5010, 8 (2003)]. Jian Fan. Abstract. ...

link.aip.org/link/?PSISDG/5010/8/1 - [Similar pages](#)

Document Recognition and Retrieval X - Conferences - Electronic ...

... 11:00 am. 11:00 am: Text extraction via an **edge-bounded averaging** and a parametric character model, J. Fan, Hewlett-Packard Labs. [5010-02]. ...

electronicimaging.org/program/ 03/conferences/index.cfm?fuseaction=5010 - 27k - [Cached](#) - [Similar pages](#)

Publications Catalog

... (USA); pages 1-7. Text extraction via an **edge-bounded averaging** and a parametric character model Jian Fan, Hewlett-Packard Labs. (USA); pages 8-19. ...

www.imaging.org/store/physpub. cfm?seriesid=24&pubid=571 - 17k - [Cached](#) - [Similar pages](#)

In order to show you the most relevant results, we have omitted some entries very similar to the 5 already displayed.

If you like, you can repeat the search with the omitted results included.

Free! Google Desktop Search: Search your own computer. [Download now.](#)

Find:  emails -  files -  chats -  web history -  media -  PDF

[Search within results](#) | [Language Tools](#) | [Search Tips](#) | [Dissatisfied? Help us improve](#)

10/044558

[IEEE HOME](#) | [SEARCH IEEE](#) | [SHOP](#) | [WEB ACCOUNT](#) | [CONTACT IEEE](#)[Membership](#) | [Publications/Services](#) | [Standards](#) | [Conferences](#) | [Careers/Jobs](#)**IEEE Xplore®**
RELEASE 1.8Welcome
United States Patent and Trademark Office[Help](#) | [FAQ](#) | [Terms](#) | [IEEE Peer Review](#)[Quick Links](#)

Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

IEEE Enterprise

- ☐ Access the IEEE Enterprise File Cabinet

Your search matched **0** of **1138071** documents.A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.

Refine This Search:

You may refine your search by editing the current search expression or entering a new one in the text box.

☐ Check to search within this result set

Results Key:

JNL = Journal or Magazine **CNF** = Conference **STD** = Standard

Results:

No documents matched your query.

Print Format

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

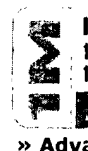
Here Some prob.....null

IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE



Membership Publications/Services Standards Conferences Careers/Jobs

IEEE Xplore®
 RELEASE 1.8

 Welcome
 United States Patent and Trademark Office

[Help](#) [FAQ](#) [Terms](#) [IEEE Peer Review](#)

Quick Links

Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

IEEE Enterprise

- ☐ Access the IEEE Enterprise File Cabinet

Try our New Full-text Search Prototype **GO**[Help](#)

- 1) Enter a single keyword, phrase, or Boolean expression.
Example: acoustic imaging (means the phrase acoustic imaging plus any stem variations)
- 2) Limit your search by using search operators and field codes, if desired.
Example: optical <and> (fiber <or> fibre) <in> ti
- 3) Limit the results by selecting Search Options.
- 4) Click Search. See [Search Examples](#)

```
(averag* <or> mean) <near/2>
((touch* <or> connect* <or>
adjacent) <near/2> (pixel
<or> pel <or> element))
```

Start Search

Clear

Note: This function returns plural and suffixed forms of the keyword(s).

Search operators: <and> <or> <not> <in> [More](#)

Field codes: au (author), ti (title), ab (abstract), jn (publication name), de (index term) [More](#)

Search Options:

Select publication types:

- ☒ IEEE Journals
- ☒ IEE Journals
- ☒ IEEE Conference proceedings
- ☒ IEE Conference proceedings
- ☒ IEEE Standards

Select years to search:

 From year: to

Organize search results by:

Sort by: In: orderList Results per page

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

Here Some prob.....null

IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE



Membership Publications/Services Standards Conferences Careers/Jobs

IEEE Xplore®
 RELEASE 1.8

 Welcome
 United States Patent and Trademark Office

[Help](#) [FAQ](#) [Terms](#) [IEEE Peer Review](#)

Quick Links

Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

IEEE Enterprise

- ☐ Access the IEEE Enterprise File Cabinet

Try our New Full-text Search Prototype **GO**[Help](#)

- 1) Enter a single keyword, phrase, or Boolean expression.
Example: acoustic imaging (means the phrase acoustic imaging plus any stem variations)
- 2) Limit your search by using search operators and field codes, if desired.
Example: optical <and> (fiber <or> fibre) <in> ti
- 3) Limit the results by selecting Search Options.
- 4) Click Search. See [Search Examples](#)

 immediate <near/2> (neighbor
 <or> neighbour) <near/2>
 averag*

Start Search

Clear

Note: This function returns plural and suffixed forms of the keyword(s).

 Search operators: <and> <or> <not> <in> [More](#)

 Field codes: au (author), ti (title), ab (abstract), jn (publication name), de (index term) [More](#)
Search Options:**Select publication types:**

- ☒ IEEE Journals
- ☒ IEE Journals
- ☒ IEEE Conference proceedings
- ☒ IEE Conference proceedings
- ☒ IEEE Standards

Select years to search:
 From year: to
Organize search results by:Sort by: In: orderList Results per page
[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

[IEEE HOME](#) | [SEARCH IEEE](#) | [SHOP](#) | [WEB ACCOUNT](#) | [CONTACT IEEE](#)[Membership](#) | [Publications/Services](#) | [Standards](#) | [Conferences](#) | [Careers/Jobs](#)**IEEE Xplore®**
RELEASE 1.8Welcome
United States Patent and Trademark Office[Help](#) | [FAQ](#) | [Terms](#) | [IEEE Peer Review](#)[Quick Links](#)**Welcome to IEEE Xplore®**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

IEEE Enterprise

- ☐ Access the IEEE Enterprise File Cabinet

Your search matched **0** of **1138071** documents.A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.**Refine This Search:**

You may refine your search by editing the current search expression or enter a new one in the text box.

☐ Check to search within this result set**Results Key:****JNL** = Journal or Magazine **CNF** = Conference **STD** = Standard**Results:****No documents matched your query.** **Print Format**[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

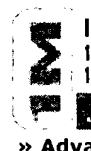
Here Some prob.....null

IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE



Membership Publications/Services Standards Conferences Careers/Jobs

IEEE Xplore®
 RELEASE 1.8

 Welcome
 United States Patent and Trademark Office

[Help](#) [FAQ](#) [Terms](#) [IEEE Peer Review](#)

Quick Links

Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

IEEE Enterprise

- ☐ Access the IEEE Enterprise File Cabinet

Try our New Full-text Search Prototype **GO**[Help](#)

- 1) Enter a single keyword, phrase, or Boolean expression.
Example: acoustic imaging (means the phrase acoustic imaging plus any stem variations)
- 2) Limit your search by using search operators and field codes, if desired.
Example: optical <and> (fiber <or> fibre) <in> ti
- 3) Limit the results by selecting Search Options.
- 4) Click Search. See [Search Examples](#)

```
(text <near/2> extract*)
<and> classif* <and> (edge
<or> (line segments))
```

Start Search

Clear

Note: This function returns plural and suffixed forms of the keyword(s).

Search operators: <and> <or> <not> <in> [More](#)

Field codes: au (author), ti (title), ab (abstract), jn (publication name), de (index term) [More](#)

Search Options:

Select publication types:

- ☒ IEEE Journals
- ☒ IEE Journals
- ☒ IEEE Conference proceedings
- ☒ IEE Conference proceedings
- ☒ IEEE Standards

Select years to search:

 From year: to

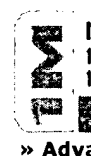
Organize search results by:

Sort by: In: orderList Results per page

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE



» Adva

Membership Publications/Services Standards Conferences Careers/Jobs

IEEE Xplore®
 RELEASE 1.8

 Welcome
 United States Patent and Trademark Office

[Help](#) [FAQ](#) [Terms](#) [IEEE Peer Review](#)
[Quick Links](#)

Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced
- ☐ CrossRef

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

IEEE Enterprise

- ☐ Access the IEEE Enterprise File Cabinet

Try our New Full-text Search Prototype **GO**[Help](#)

- 1) Enter a single keyword, phrase, or Boolean expression.
Example: acoustic imaging (means the phrase acoustic imaging plus any stem variations)
- 2) Limit your search by using search operators and field codes, if desired.
Example: optical <and> (fiber <or> fibre) <in> ti
- 3) Limit the results by selecting Search Options.
- 4) Click Search. See [Search Examples](#)

```
(text <near/2> extract*)
<and> (classif* <near/3>
(pixel <or> pel <or> element))
```

Start Search

Clear

Note: This function returns plural and suffixed forms of the keyword(s).

Search operators: <and> <or> <not> <in> [More](#)

Field codes: au (author), ti (title), ab (abstract), jn (publication name), de (index term) [More](#)

Search Options:

Select publication types:

- ☒ IEEE Journals
- ☒ IEE Journals
- ☒ IEEE Conference proceedings
- ☒ IEE Conference proceedings
- ☒ IEEE Standards

Select years to search:

 From year: to

Organize search results by:

 Sort by:
 In: order

 List Results per page

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

10/044558

IEEE Xplore Search 3/18/05

((touch* <or> connect* <or> adjacent) <near/2> (pixel <or> pel <or> element)) <near/4> (((divid* <or> ratio <or> proportion <or> fraction) <near/3> (total or all))

((character <or> word) <near/2> extract*) <and> (classif* <near/3> (pixel <or> pel <or> element <or> edge <or> segment))